

What is claimed is:

1. A lead assembly comprising:
a flexible lead body extending from a proximal end to a distal end, the lead
5 body including one or more conductors disposed therein;
the lead body including an outer coating of composite insulative material;
an electrode assembly including at least one electrode electrically coupled
with at least one conductor; and
the outer coating of composite insulative material coated directly on at least
10 one conductor.
2. The lead assembly as recited in claim 1, wherein the one or more conductors
includes a first conductor and a second conductor, and at least one coating is coated
between the first conductor and the second conductor.
- 15 3. The lead assembly as recited in claim 1, wherein at least one conductor
comprises a braided conductor.
4. The lead assembly as recited in claim 1, wherein one of the conductors
20 extends from a first end to a second end and has an intermediate section
therebetween, and a portion of the intermediate section has an exposed, non-coated
area.
5. The lead assembly as recited in claim 4, further comprising one or more
25 electrodes electrically coupled with the exposed non-coated area.
6. The lead assembly as recited in claim 1, wherein the composite coating
comprises a first coating and a second coating coated over the first coating.

7. The lead assembly as recited in claim 1, wherein the one or more conductors includes a first conductor disposed within a second conductor, and at least one coating is coated between the first conductor and the second conductor, and a layer of insulation is disposed within the first conductor.

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8. A lead assembly comprising:

a flexible lead body extending from a proximal end to a distal end, the lead body including one or more conductors disposed therein, the flexible lead body comprising a first coating disposed directly on a first conductor,

10 an electrode assembly including at least one electrode electrically coupled with at least one conductor; and

at least one second coating of insulative material coated directly on a second conductor, the at least one second coating is coated between the first conductor and the second conductor.

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9. The lead assembly as recited in claim 8, wherein the first conductor comprises a braided conductor.

10. The lead assembly as recited in claim 8, wherein the first conductor extends from a first end to a second end and has an intermediate section therebetween, and a portion of the intermediate section has an exposed, non-coated area.

11. The lead assembly as recited in claim 10, further comprising one or more electrodes mechanically coupled with the exposed non-coated area.

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12. The lead assembly as recited in claim 8, wherein the first conductor comprises a means for extending and retracting the electrode assembly.

13. The lead assembly as recited in claim 8, further comprising a third coating of insulative material coated directly on the first coating of insulative material.

14. The lead assembly as recited in claim 13, wherein the first coating is formed of a first material, and the third coating is formed of a second material, and the first material is different than the second material.

15. A lead assembly comprising:
a lead body extending from a proximal end to a distal end, the lead body including one or more conductors disposed therein, at least one conductor comprising a braided conductor, the braided conductor configured to conduct electrical signals;
an electrode assembly including at least one electrode electrically coupled with at least one conductor; and
at least one coating of insulation coated directly on the braided conductor.

16. The lead assembly as recited in claim 15, wherein a portion of the at least one coating is removed from the braided conductor to reveal an exposed portion of the braided conductor, and at least one electrode is electrically and mechanically coupled with the exposed portion of the braided conductor.

17. The lead assembly as recited in claim 15, wherein the braided conductor is rotatable to extend and/or retract at least one electrode.

18. The lead assembly as recited in claim 15, further comprising a second coating of insulation coated between the braided conductor and a second conductor, and the second coating is coated directly on the second conductor.

19. The lead assembly as recited in claim 15, the lead body including an outer coating of composite insulative coating.

20. The lead assembly as recited in claim 19, wherein the composite coating
5 includes at least a first coating and a second coating coated directly on the first coating.

21. A method comprising:
providing a first conductor;
10 forming an outer composite lead body over the first conductor including coating composite insulative material directly on the first conductor; and coupling at least one electrode with the first conductor.

22. The method as recited in claim 21, further comprising braiding multiple
15 conductors to form the first conductor.

23 The method as recited in claim 22, further comprising rotating the first braided conductor, and extending the at least one electrode away from the outer composite lead body.

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24. The method as recited in claim 21, further comprising stripping insulative material from a portion of the first conductor, and exposing a portion of the first conductor.

25 25. The method as recited in claim 24, further comprising mechanically and electrically coupling an electrode to the exposed portion of the first conductor.

26. The method as recited in claim 21, further comprising providing a second conductor, and coating a second coating of insulative material directly on the second conductor.

5 27. The method as recited in claim 21, wherein forming the outer composite lead body includes coating a first layer of a first material directly on the first conductor, and coating a second layer of a second material directly on the first layer of first material.

10 28. A method comprising:

providing a first conductor for a lead, the first conductor extending from a proximal end to a distal end and having an inner diameter surface and an outer diameter surface;

coating the outer diameter surface of the first conductor with an insulative
15 coating, including leaving the inner diameter surface uncoated;

providing a second conductor coaxial with the first conductor, where the first conductor has a different outer diameter than the second conductor;

coupling at least one electrode with the first conductor; and

coupling the proximal end of the first conductor with an energy source
20 configured to stimulate tissue.

29. The method as recited in claim 28, further comprising rotating the coated first conductor, and extending the at least one electrode away from the lead.

25 30. The method as recited in claim 28, further comprising stripping insulative material from a portion of the first conductor, and exposing a portion of the first conductor.

31. The method as recited in claim 30, further comprising mechanically and electrically coupling an electrode to the exposed portion of the first conductor.

32. The method as recited in claim 28, wherein coating the first conductor
5 includes forming an outer lead body of composite insulative material.

33. The method as recited in claim 28, further comprising coating an outer diameter of the second conductor with insulative material.